

Button layout pattern, 37, 42, 43, 57, 53 juxtaposed button shapes 57, 58 FIG 3a, FIG 4b,4d, and raised markings 2,5, 58 as represented on each button, draw a distinction to the users touch between button functions, allowing user to dial, receive and field wireless communication operations by touch alone as exhibited in FIG 1-4c. In FIG 3a two opposing arrow shaped keys are set within a depression 61 contoured to the thumb for central orientation to the keys. Raised lettering may be additionally set off-center within keys to lend further tactile operational cues to the operator 58, 62. This by-touch operational method inherent in the various embodiments of the device is additionally wedded to and enabled by finger groove/s and ridges set in the housing of the user interface 6, 7, 4a, 4c, 60, 61 allowing a user to quickly orient hand position relative to key placement.

FIG's 4a-4d show an embodiment of the Device depicting single-handed by-touch operations using the left hand. Standard transmissions in automobiles require the regular use of the right hand for shifting purposes. In this embodiment, a user positions the left hand in the "key" position FIG 4c using the contours of the device as quick guides. From the "key" position all buttons along the front of the Device may be depressed with the thumb alone. Round, oval, and arrow shaped keys 57, 58, 62 assist the user in distinguishing the button and key location relative to other keys. For example, arrow shaped keys 57 positioned at the corners of the number-pad 43 point inward to distinguish for the user the boundaries of the number-pad. In this way, the outside rim of numbers can be quickly registered by touch. Additional raised marking on the keys themselves further distinguishes them by touch for the user 43, FIG 4a. Once a number is dialed as shown in FIG 4c a connection can be made by depressing the left arrow shaped scroll button in 42, FIG 3 as further shown in FIG 4d or terminated as shown in the same figures by pressing the right scroll button 42. FIG 4a shows the user depressing with the index finger a key on the rear of the fascia reserved for freezing use of facia keys to prevent accidental interruption of calls. With extended pressure the same key may be used to power on or off the device.

The embodiment as shown in FIG 3, 3a and FIG's 4a-4d shows additional function keys placed under the display 44, 62 which include but are not limited to phonebook, memory, messaging, and internet functions. These functions maybe varied or expanded, but the keys themselves are designed to be within reach of the thumb for ready and single-handed use. Also, included in this embodiment is a speakerphone function potentially allowing the user to operate the Device as a stand-alone mechanism should it also house, as it may, two-way wireless communication circuitry and internet connectivity. Such circuitry is well known in the art for internet and cell-phone devices.

Having now provided a detailed description of the present invention, it should now be apparent to those skilled in this art that the forgoing is illustrative but not limiting, having been presented by way of example only. Numerous embodiments, other than those illustrated here as means of example, and modifications thereof are contemplated as falling within the scope of the present invention and as defined by the appended claims and equivalents thereto.

What is claimed is:

1. a mechanical user interface (MUI) for a wireless communications device comprising:  
a communications keypad coupled to the steering wheel of a motor vehicle  
a visual operational display  
a method inherent in physical design enabling operation by touch rather than sight

2. the invention in accordance with claim 1 further comprising:
  - a remote and/or direct communications link to a host cell-phone
  - a remote and/or direct communications link to a voice/speaker interface or headset
3. the invention in accordance with claim 1 further comprising:
  - a communications keypad coupled to a steering wheel
  - a remote and/or direct communications link to a host cell-phone
  - a remote and/or direct communications link to a voice/speaker interface or headset
4. the invention in accordance with claim 1 further comprising:
  - a remote and/or direct communications link to a cell phone
5. the invention in accordance with claim 1 further comprising:
  - wireless communication connectivity
6. the invention in accordance with claim 1 further comprising:
  - a remote and/or direct communications link to the internet
7. the invention in accordance with claim 1 further comprising:
  - operational keys placed so as to be positioned on the backside of the steering wheel relative to the vehicle operator
8. the invention in accordance with claim 1 further comprising:
  - operational keys placed so as to be positioned at the fingertips of the vehicle operator.
9. the invention in accordance with claim 1 further comprising:
  - raised lettering
10. the invention in accordance with claim 1 further comprising:
  - raised lettering on keys placed off-center of key as tactile cue
11. the invention in accordance with claim 1 further comprising:
  - a visual operational-display which rotates, allowing it to be read vertically and horizontally
12. the invention in accordance with claim 1 further comprising:
  - a rotating visual operational-display capable of maintaining verticality independent of the plain maintained by the MUI control facial.
13. the invention in accordance with claim 1 further comprising:
  - a speakerphone
14. the invention in accordance with claim 1 further comprising:
  - a wireless headset

15. the invention in accordance with claim 1 further comprising:  
wireless connectivity
16. the invention in accordance with claim 1 further comprising:  
a rotating visual operational-display  
wireless two-way connectivity  
a wireless headset  
a speakerphone
17. A method for operation of a mechanical user interface (MUI) for a wireless communications device coupled to the steering wheel of a motor vehicle comprising:
- placement of at least one hand on steering wheel *in order* that a user may initiate or otherwise transact wireless communication through the act of depression of keys on keypad.
- tactile operational cues on fascia and housing designed for method of operation not requiring visual cues for operation.
- keypad operation through the use of tactile cues on fascia and housing allowing through method and utility a vehicle operator's train of vision to remain unimpeded.
18. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
raised lettering on keys
19. The invention in accordance with claim 17 further comprising:  
raised lettering on housing
20. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
key placement positioned along the backside of steering wheel.
21. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
shape and patterning of key arrangement
22. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
shape of keys
23. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
angle of keys
24. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,

finger grooves and bumps for orientation of hand along fascia

25. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
finger grooves and bumps for orientation of hand along housing
26. The invention in accordance with claim 17 further comprising:  
operational keys placed so as to be positioned at the fingertips of the vehicle operator.
27. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
operational keys placed so as to be positioned on the backside of the steering wheel  
relative to the vehicle operator
28. The invention in accordance with claim 17 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
raised lettering on keys  
patterning of key placement  
shape of keys  
angle of keys  
finger grooves and bumps for orientation of user's hand along fascia  
finger grooves and bumps for orientation of user's hand along housing  
operational keys placed so as to be positioned on the backside of the steering wheel  
operational keys placed so as to be positioned at the fingertips of the vehicle operator.
29. A mechanical user interface (MUI) for a wireless communications device comprising:  
  
a communications keypad coupled to the steering wheel of a motor vehicle  
  
a communications keypad capable of being readily uncoupled from the steering wheel of a  
motor vehicle  
  
keypad operation through the use of tactile cues on fascia and housing  
  
tactile operational cues on fascia and housing designed for method of operation not requiring  
visual cues for operation
30. The invention in accordance with claim 29 further comprising:  
raised lettering on housing
31. The invention in accordance with claim 29 further comprising:  
key placement positioned along the backside of steering wheel.
32. The invention in accordance with claim 29 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
shape and patterning of key arrangement

33. The invention in accordance with claim 29 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
shape of keys
34. The invention in accordance with claim 29 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
angle of keys
35. The invention in accordance with claim 29 further comprising:  
finger grooves and bumps for orientation of hand along fascia
36. The invention in accordance with claim 29 further comprising:  
finger grooves and bumps for orientation of hand along housing
37. The invention in accordance with claim 29 further comprising:  
operational keys placed so as to be positioned on the backside of the steering wheel  
relative to the vehicle operator
38. The invention in accordance with claim 29 further comprising:  
finger and/or hand positioning groove/s and/or ridges enabling user orientation by touch to  
key-pad
39. The invention in accordance with claim 29 further comprising:  
tactile operational cues not requiring visual cues for operation including,  
raised lettering on keys  
patterning of key placement  
shape of keys  
angle of keys  
finger grooves and bumps for orientation of user's hand along fascia  
finger grooves and bumps for orientation of user's hand along housing  
finger and/or hand positioning groove/s and/or ridges  
operational keys placed so as to be positioned on the backside of the steering wheel  
operational keys placed so as to be positioned at the fingertips of the vehicle operator.
40. The invention in accordance with claim 29 further comprising:  
tactile design orientations on dialing fascia coupled to steering wheel enable a motor vehicle  
operator to maintain consistent hand contact with the steering wheel, while initiating,  
fielding, or terminating phone calls through the method of touch.
41. The invention in accordance with claim 29 further comprising:  
a dialing key pad coupled to a steering wheel whereon are placed raised numbers, symbols,  
and/or designators.
42. The invention in accordance with claim 29 further comprising:

a dialing keypad placed on a steering wheel whereon tactile designators assign recognition value meaningful to the user for operating keypad functions on the basis of touch.

43. The invention in accordance with claim 29 further comprising:
  - an input keypad coupled to a steering wheel
  - a visual display coupled to steering wheel
  - a headset coupled via a retractable cable
44. The invention in accordance with claim 29 further comprising:
  - a visual display coupled to vehicle console
45. The invention in accordance with claim 29 further comprising:
  - a visual display placed along a driver's line of sight to the road.
46. The invention in accordance with claim 29 further comprising:
  - a rotational visual operational-display capable of being read by the operator independently of the vertical or horizontal positioning of the MUI control fascia.
47. The invention in accordance with claim 29 further comprising:
  - an interfacing link to a host wireless communications device
48. The invention in accordance with claim 29 further comprising:
  - an input keypad coupled to a steering wheel
  - an interfacing link between voice/speech interface, input keypad, and cell phone

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